

LM 400

EN 998-2
M10

White adhesion mortar for marble and granite

DESCRIPTION

Cement based mortar for building various types of building materials. It has excellent workability and high adhesion capacity.

With EUROFINS Indoor Air Comfort Gold certification which ensures that the LM 400 meets the strictest European regulations regarding VOC emissions. The product is also accompanied by an Environmental Product Declaration (EPD) regarding the environmental impact during its life cycle (EPD registration number: S-P-09530).

FIELDS OF APPLICATION

A reliable solution for strong adhesions of marble and granite boards to floors, when a thick layer of mortar is needed. LM 400 Plus is especially suitable for white or light colored marbles, which are sensitive to stains coming from the substrate. It can be also used for other natural stones such as granite, sandstone, limestone, travertine, etc, or artificial stone tiles and boards.

Add MARMOLINE MP 20 resin for further adhesion strength and more flexibility.

CHARACTERISTICS/ADVANTAGES

- Unique product for marble fixing
- High strength
- Water and frost resistant
- Easy to apply - simply add water
- Indoor and outdoor use
- Its formula, based on white cement, protects the colour of marbles

PRODUCT INFORMATION

Composition	Portland cement, aggregates of selected grain size, special additives and polymer components
Appearance/Colour	Off-white powder <i>(Color tone variations may occur between batches, as the raw materials include crushed white Dionyssos marble aggregates, which naturally shows fluctuations in shade)</i>
Packaging	25 kg paper bag – 1500 kg pallet (60 bags)
Storage conditions	Store in the original, closed, sealed packaging, protected from direct sunlight and frost and at temperatures from +5°C to +35°C
Shelf life	12 months from date of manufacture

TECHNICAL CHARACTERISTICS

Specific gravity of wet mortar:	~ 1.80 kg/lit (+20°C)
Grading:	3 mm
Compressive strength in 28 days:	≥10 MPa (EN 1015-11)
Flexural strength in 28 days:	≥2 MPa (EN 1015-11)
Shear strength:	0.15 N/mm ² (EN 998-2 – Annex C. Tabulated value)
Workable life:	~2 hours (EN 1015-9)

APPLICATION INFORMATION

Substrate temperature	+5°C / +35°C
Ambient temperature	+5°C / +35°C
Mixing ratio	~4 lt water/ 25 kg bag
Consumption	15 - 16 kg /m ² , per 1 cm thick coat of fresh mortar

DIRECTIONS OF USE

SUBSTRATE PREPARATION

Check that the substrate is clean, dry and free from loose particles and other materials

MIXING

Mix by means of a cement mixer or a special mixing machine, until a homogeneous, lump-free mixture is obtained.

MARMOLINE LM 400 is applied in the same way as with traditional materials.

For stones with adhesiveness problems, it is recommended to apply first on their surface the KM 100 adhesive.

It is recommended to add MARMOLINE MP 20 resin to a ratio of 50% in the mixing water of the fresh mortar, as well as to wash thoroughly the marbles, granites or other stone boards before fixing them on clean MARMOLINE cement screed (GB 30 - GTL 30 - FLOW 200 - FLOW SL 500)

APPLICATION

The marble slabs must be fixed within 10 minutes and before the fresh mortar skins-over.

Pay special attention when fixing white marble, to avoid any stains coming from dirty mixing water, or wood, oils, coffee, cigarette butts, etc on the substrate

On outside stairs and in courtyards, avoid the use of bricks behind or under marble, because over

time and due to humidity, the colour of the brick may pass through the marble

TOOLS CLEANING

Fresh material should be removed from the equipment with water immediately after application. Hardened/mature material can only be removed by mechanical means.

IMPORTANT NOTICE

- Not recommended for use in extreme weather conditions (frost or heatwave). Application temperature +5 °C to +35 °C.
- The content of the bag should be protected from humidity
- Do not add excessive amounts of water because this can reduce the product's strength

COMPLIANCE WITH STANDARDS

CE marking and Declaration of Performance as General purpose masonry mortar (G), type M10 according to EN 998-2.

HEALTH, SAFETY & ENVIRONMENTAL PROTECTION

Detailed information and instructions regarding the safe management of the product and in matters of Health & Safety, are provided in the most recent Safety Data Sheet (SDS), copies of which are available on the company's website <https://marmoline.gr/> or upon request.


LEGAL NOTICE

We guarantee the quality of all our products, based on their technical specifications, as described in the Declaration of Performance (CE) and this Technical Data Sheet. Such guarantee refers only to the products that we deliver for use and never to its application or final result, which largely depends on the experience and quality of work of each user and on the application conditions. The user is advised to test the product on a small scale, and if he is satisfied with the result, then to use the product on large scale in his project.

All data stated in this Technical Data Sheet are based on laboratory tests. The really measurable data might differentiate due to conditions that are not subject to our control. The recommendations and implementation instructions must be considered by the user as indicative, and always with given that the product has been traded and traded and stored according to its instructions.

As it is not possible to control the parameters/conditions of its application product in practice, no guarantee is provided for the final result of each application. Consequently, no legal liability of the Company can be established based on the information and instruction given in this Technical Data Sheet.

The Company reserves the right to modify data listed in this Product Data Sheet, with no previous warning. Users must refer to the latest version of the product Technical Data Sheet .

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NORDIA SA 364 Kifissias Av., 15233 Chalandri, Athens, Greece	
EN 998-2:2016 MARMOLINE LM 400 General purpose masonry mortar (G)	
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Compressive strength :	M10
Shear strength	0.15 N/mm ²
Reaction to fire:	Class A1
Water absorption:	< 0.5 kg/m ² min ^{0.5}
Water vapour permeability (μ)	15/35
Thermal conductivity:	0.60 W/mK (λ _{10,dry} P=50%)
Chloride content:	≤ 0.1%
Workable life:	130 min
Durability	NPD
Dangerous substances:	See SDS
See detailed DoP in https://marmoline.gr	